Attorney's Docket No.: 07039-161001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Yuan-Ping Pang
Serial No. : 09/595,650
Filed : June 16, 2000
Title : MOLECULAR MODELING FOR METALLOPROTEINS

Art Unit : 1631
Examiner : M. Sheinberg

ATTN: GROUP 1600 DIRECTOR
Commissioner for Patents
Washington, DC 20231

PETITION TO COMMISSIONER OF PATENTS AND TRADEMARKS TO WITHDRAW REQUIREMENT FOR RESTRICTION

Under the provisions of 37 C.F.R. §1.144, Applicant respectfully petitions the Honorable Commissioner of Patents and Trademarks to review the requirement for restriction set forth in the Final Office Action ("OA") mailed April 19, 2002, and maintained in the Advisory Action mailed July 18, 2002.

In the OA, the Examiner withdrew claims 55-72 pursuant to 37 C.F.R. § 1.142(b) as being drawn to non-elected Group 1, stating without any accompanying reasons or evidence that:

> Group 1 is drawn to a method of molecular dynamic simulation that uses a simulated metal ion. Claims 55-72, as a computer readable medium that stores instructions for molecular dynamic simulation, are considered to correspond to the invention of Group 1.

(OA at p. 2.)

In the Advisory Action, the Examiner asserted that claims 55-72 were drawn to the non-elected Group I as a program that executes the method of claim 1.

It is incumbent to support a rejection or withdrawal of claims with sound reasoning and evidence so the Applicant can evaluate the propriety of the rejection or withdrawal. See 35

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August 19, 2002
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U.S.C. § 132; In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999) (citing Application of Sichert, 566 F.2d 1154, 1164 (Cust. & Pat. App. 1977)). The Examiner has failed to meet this burden with the unsupported assertion that claims 55-72 fall within the method claims of previously identified Group I (i.e., claims 1-18, 25-31, 33, and 35-36). (Paper No. 5 at p. 2.) Independent claim 1, the only independent claim within Group I, reads as follows:

> 1. A method for designing a metal ion for use in a molecular dynamics simulation comprising the steps of:
>
> a) building a metal ion molecule having a center atom and a dummy atom;
>
> b) assigning a van der Waals radius to said center atom; and
>
> c) assigning a charge to said dummy atom, wherein said center atom and said dummy atom are covalently bonded, and wherein said metal ion molecule has a polyhedron geometry.

Claims 55-72 are not method claims. Claims 55-72 relate to an article of manufacture and recite "a computer readable medium." Independent claim 55 reads as follows (as amended in the response to the OA, filed on June 18, 2002):

> 55. (Amended) A computer readable medium having computer executable instructions stored thereon, wherein the execution of said instructions simulates a metal ion, said metal ion comprising a center atom having a van der Waals radius greater than zero covalently linked to one or more dummy atoms having a van der Waals radius of about zero, wherein the overall charge of said metal ion is evenly distributed among said dummy atoms and wherein said center atom has a charge of zero.

A claim that contains method steps does not transform the claim from an article claim to a method claim. See In re Warmerdam, 33 F.3d 1354, 1361 (Fed. Cir. 1994). Method claims by their very nature involve an active step, i.e., a process. A computer readable medium is an article of manufacture, not a method. Thus claims 55-72 cannot reasonably be characterized as belonging to non-elected Group I.

Claims 55-72 are not independent and distinct from claims 37-54, and therefore it is improper for the Examiner to withdraw them from further consideration. Independent claim 37, as amended in the response to the OA filed on June 18, 2002, is recited below.

> 37. (Twice Amended) A machine having a memory that contains data representing a simulated metal ion generated by a molecular dynamics simulation, wherein said simulated metal ion comprises a center atom having a van der Waals radius greater than

zero covalently linked to one or more dummy atoms having a van der Waals radius of about zero, wherein the overall charge of said metal ion is evenly distributed among said dummy atoms and wherein said center atom has a charge of zero.

A restriction requirement may be applied to a subset of claims only if the restricted claims are independent and distinct from the remaining claims. See, e.g., 37 CFR § 1.145. The Manual of Patent Examining Procedure ("M.P.E.P.") defines "independent" and "distinct" as follows:

> INDEPENDENT
> The term "independent" (i.e., not dependent) means that there is no disclosed relationship between the two or more subjects disclosed, that is, they are unconnected in design, operation or effect, for example, (1) species under a genus which species are not usable together as disclosed or (2) process and apparatus incapable of being used in practicing the process.
>
> DISTINCT
> The term "distinct" means that two or more subjects as disclosed are related, for example as combination and part (subcombination) thereof, process and apparatus for its practice, process and product made, etc., but are capable of separate manufacture, use or sale as claimed, AND ARE PATENTABLE (novel and unobvious) OVER EACH OTHER (though they may each be unpatentable because of the prior art). It will be noted that in this definition the term "related" is used as an alternative for "dependent" in referring to subjects other than independent subjects.

See M.P.E.P. § 802.01 (emphasis in original).

The Examiner failed to provide any evidence showing that claims 55-72 are both independent and distinct from claims 37-54. Additionally, claims 55-72 are not independent and distinct from claims 37-54. Rather, the inventions recited in each set of claims *are* connected in operation and effect. Both sets of claims relate to computer readable media for used for metal ion simulation. Claims 55-72 relate to a computer readable medium having executable instructions that simulate a metal ion. Claims 37-54 relate to a machine having data structures that store a simulated metal ion. Thus, claims 55-72 and claims 37-54 are not independent and distinct from each other, and should be examined together.

Even if claims 55-72 were independent and distinct from claims 37-54, searching the claim sets together could be made without serious burden. "If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the

merits, even though it includes claims to distinct or independent inventions." See, e.g., M.P.E.P. § 803. Both sets of claims refer to the same type of simulated ion and both sets of claims concern computer generated simulated ions. As such, searching either set of claims will satisfy the search requirements for the other set. A search for references relevant to each set of claims would be coextensive, and no serious burden would be incurred by examining claims 55-72 together with related claims 37-54. Under such conditions, the Examiner should search both sets of claims regardless of the independence and/or distinctiveness of the claims.

Accordingly, it is respectfully requested that the requirement for restriction be withdrawn, and claims 55-72 be examined on the merits.

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Respectfully submitted,

Date: 8/19/02

Monica McCormick Graham, Ph.D.
Reg. No. 42,600

Fish & Richardson P.C., P.A.
60 South Sixth Street
Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (612) 288-9696